

Table 2-1

## WNP-2 LIQUID EFFLUENTS - SUMMATION OF ALL RELEASES

January - July 1985

Unit	1st Quarter	2nd Quarter	Est. Total Error, %
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## A. Fission and activation products

1. Total release (not including tritium, gases, alpha)	Ci	1.0E-03	2.8E-03	2.2 E+1
2. Average diluted concentration during period	uCi/ml	9.5E-10	1.0E-08	
3. Percent of MPC limit	%	5.0E-02	6.7E-02	

## B. Tritium

1. Total release	Ci	1.5E-01	9.2E-01	2.2 E+1
2. Average diluted concentration during period	uCi/ml	1.5E-07	3.7E-06	
3. Percent of MPC limit	%	4.9E-03	1.5E-01	

## C. Gross alpha radioactivity(1)

1. Total release	Ci	4.3E-05	8.0E-07	1.7 E+1
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D. Volume of waste (prior to dilution)	liters	1.2E+05	8.6E+05	1.5 E+1
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E. Volume of dilution water used during period	liters	1.0E+09	2.7E+08	1.5 E+1
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(1) Below MDA values.

Table 3-4

WNP-2 GASEOUS EFFLUENTS  
SUMMATION OF ALL RELEASES

January - June 1985

Unit	1st Quarter	2nd Quarter	Est. Total Error %*
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A. Fission & activation gases

1. Total release	Ci	4.4 E+01	3.0 E+01	3.6 E+1
2. Average release rate for period	uCi/sec	5.7 E+00	3.8 E+00	
3. Percent of Tech. Spec. limit	%	7.4 E-04	5.6 E-03	

B. Iodines

1. Total iodine (131, 133)	Ci	1.3 E-02	6.8 E-03	3.6 E+1
2. Average release rate for period	uCi/sec	9.4 E-04	8.6 E-04	
3. Percent of Tech. Spec. limit	%	4.7 E-04	1.3 E-04	

C. Particulates

1. Particulates with half-lives 8 days	Ci	2.0 E-02	3.2 E-02	3.6 E+1
2. Average release rate for period	uCi/sec	2.7 E-03	4.1 E-03	
3. Percent of Tech. Spec. limit	%	1.3 E-03	2.1 E-03	
4. Gross alpha radioactivity	Ci	3.1 E-04	2.7 E-04	

D. Tritium

1. Total releases	Ci	6.6 E-01	2.7 E-01	3.6 E+1
2. Average release rate for period	uCi/sec	8.6 E-02	3.4 E-02	
3. Percent of Tech. Spec. limit**	%	1.0 E-05	7.3 E-06	

\* At 95% confidence level

\*\* Based on offsite exposure to the maximum organ. age group, the child.

#### 4.0 SOLID WASTE

A total volume of  $2.19\text{E}+02\text{ m}^3$  ( $7.74\text{E}+03\text{ ft}^3$ ) of solid waste was transported in 25 shipments during the reporting period. The total activity of the solid waste shipped was  $1.95\text{E}+02\text{ Ci}$ ; 195.24 Ci consisting of Dewatered Spent Resins and  $2.73\text{ E}-02\text{ Ci}$  as Dry Active Waste (DAW).

##### A. Dewatered Spent Resin

$1.38\text{ E}+02\text{ m}^3$  ( $4.86\text{ E}+03\text{ ft}^3$ ) of dewatered spent resin were shipped during the reporting period. The shipping containers were CNS 14-195 liners (burial volume - 195  $\text{ft}^3$ , actual volume - 180  $\text{ft}^3$ ) from Chemical Nuclear. The total activity shipped during the reporting period was 195 Ci. The principle nuclides and their percentage contribution to the total activity is listed in Table 4-1. The solid wastes were shipped to the U.S. Ecology burial site in Richland, Washington using flat bed trailers.

The counting error associated with the total activity of the six principle nuclides (about 99.5% of the total activity shipped) is 0.6% at one standard deviation. Since the remaining nuclides represents such a small portion of the total activity shipped, their error contribution was neglected.

Other parameters considered in estimating the total error of the activity shipped included the error in measuring the absolute volume, the weight of the waste in the liners, the representativeness of the sample taken, the homogeneity of the nuclide distribution within a batch or liner and the geometry error in the gamma spectroscopy analysis. The ND6600 NBS calibration error was approximately 5%. The best estimate of the total error in the activity of spent resin shipped was assumed to be less than or equal to 20%.

- B. A total of  $8.16\text{ E}+01\text{ m}^3$  ( $2.88\text{ E}+03\text{ ft}^3$ ) of dry active waste (DAW) was shipped in 32 Container Product Corporation B-25 steel boxes. The values for the activities shipped were determined by using dose rate-to-curie conversion factors. The conversion factors were based on a nuclide distribution taken from reactor coolant sample analyses which are representative for the time period in which the waste was generated. Short lived nuclides were eliminated based on decay of the DAW prior to shipment. A meaningful counting error cannot be generated for the DAW, however, the total error may be assumed to be less than or equal to 20% since DAW would be subjected to similar error contributions as the spent resins.

## 3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
25	Flat bed trailer (4) 14-195H Cask (4) 21-300 Cask (17)	US Ecology Richland, WA

## B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
None		